OBJECTIVE BIOCHEMISTRY

R.S. SENGAR RESHU CHAUDHARY





OBJECTIVE BIOCHEMISTRY

Question Bank : For Competitive Examinations Strictly According to the Latest Syllabus

Useful for:

ICAR, ASRB, NET, JRF, SRF, ARS, NAARM, IARI, NDRI,
CSIR-JRF-NET, GATE, ICMR, DBI, UPCATET, JNU,
Entrance Examination for Admission to
M.Sc., Ph.D., Pharmacy Nursing, Physiotherapy, and Paramedical Programmes
UPSC Administrative Service (Pre and Mains)
State Public Service Commission (Pre and Mains)
Undergraduate and Postgraduate Courses of Various Indian Universities

R.S. Sengar Reshu Chaudhary



New Delhi - 110 034



NEW INDIA PUBLISHING AGENCY

101, Vikas Surya Plaza, CU Block, LSC Market Pitam Pura, New Delhi 110 034, India

Phone: + 91 (11)27 34 17 17 Fax: + 91(11) 27 34 16 16

Email: info@nipabooks.com Web: www.nipabooks.com

Feedback at feedbacks@nipabooks.com

© Authors, 2014

ISBN: 978-93-81450-37-6

All rights reserved, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the publisher or the copyright holder.

This book contains information obtained from authentic and highly regarded sources. Reasonable efforts have been made to publish reliable data and information, but the author/s, editor/s and publisher cannot assume responsibility for the validity of all materials or the consequences of their use. The author/s, editor/s and publisher have attempted to trace and acknowledge the copyright holders of all material reproduced in this publication and apologize to copyright holders if permission and acknowledgements to publish in this form have not been taken. If any copyright material has not been acknowledged please write and let us know so we may rectify it, in subsequent reprints.

Trademark notice: Presentations, logos (the way they are written/presented), name of the material and author/s, editor/s details in this book are under the trademarks of the publisher and hence, if copied/resembled the copier will be prosecuted under the law.

Composed and Designed by NIPA

Contents

Foreword	v
Preface	ix
1. Atoms, Molecules and Chemical Arithmetic	1
2. Atomic Structure	7
3. Bonding and Molecular Structure	15
4. Water and pH buffer	23
5. Biological Energy Generation and Thermodynamics	47
6. Carbohydrates	117
7. Amino Acids and Proteins	193
8. Biosynthesis of Protein	313
9. Protein Regulation and Targeting	321
10. Lipids	329
11. Nucleic Acids (Part - I) DNA (Deoxyribonucleic acid) .	407
12. Nucleic Acids (Part - II) RNA (Ribonucleic acid)	423
13. Replication, Transcription and Translation	511
14. Chromosomal Basis of Inheritance	559
15. Genetic Basis of Inheritance	587
16. Signal Transduction	623
17. Enzymes	673
18. Hormones and Growth Substances	791
19. Pigments	871
20. Tools and Techniques	879
21. Nature of Gene: Its Expression and Regulation	913
22. Agricultural Biochemistry	949
23 Vitamina	067

OBJECTIVE BIOCHEMISTRY

Readership: The book will serve as one hand book for all those preparing for examinations.

This book is basically for students who plan to appear for various in the entrance examinations. There is a dearth of good entrance books for the above said examinations.

- This book is completely as per the latest syllabus.
- This book will be useful for students preparing for ICAR, ASRB, NET, JRF, SRF, GATE, ICMR, CSIR, NAARM, DBT, UPCATET, IARI, NDRI, JNU, UPSC, UG & PG Level



R.S. Sengar: Associate Professor, Department of Agricultural Biotechnology, College of Agriculture in Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh

Reshu Chaudhary: M.Sc., Biochemistry from Chaudhary Charan Singh University, Meerut, Uttar Pradesh

2014, 1028pages, 25cm

CONTENTS

- Atoms and molecules and Chemical Arithmetic
 - Atomic Structures
 - **Bonding and Molecular Structure**
 - Water and pH buffer
- **Biological Energy Generation and Thermodynamics**
 - Carbohydrates =
 - Amino Acids & Metabolism
 - Biosynthesis of Protein
 - Protein Regulation and Targeting
 - Lipids =
- Nucleic Acids (Part- I) DNA (Deoxyribonucleic acid)
 - Nucleic Acids (Part- II) DNA (Ribonucleic acid)
 - Replication, Transcription and Translation
 - **Chromosomal Basis of Inheritance**
 - Genetic Basis of Inheritance
 - Signal Transduction
 - Enzymes
 - **Hormones and Growth Substances**
 - **Pigments**
 - Tools and Techniques
 - Nature of Gene: Its Expression and Regulation
 - Agricultural Biochemistry
 - Vitamins



NEW INDIA PUBLISHING AGENCY

101, Vikas Surya Plaza, CU Block, L.S.C.Market Pitam Pura, New Delhi-110 034, India

Tel.: +91(11) 27341717, Fax: +91(11) 27341616

E-mail: info@nipabooks.com Web: www.nipabooks.com

